

Mediators Inflamm. 1998;7(2):105-10.

## **(1-->3)-beta-D-glucan and endotoxin modulate immune response to inhaled allergen**

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### **Abstract**

Exposure to dust may involve co-exposure to agents which are allergens, together with those which are pro-inflammatory. To study the effects of such a co-exposure, the humoral and inflammatory responses were studied in guinea pigs inhaling the T-cell-dependent antigen ovalbumin (OVA) and the inflammatory agents (1 --> 3)-beta-D-glucan and lipopolysaccharide (LPS). The effects were evaluated as inflammatory cells in the lung and serum antibodies to OVA. LPS caused a stimulation of the OVA-induced antibody production which was abolished by simultaneous exposure to (1 --> 3)-beta-D-glucan. An increase of eosinophils after OVA exposure was decreased by co-exposure to (1 --> 3)-beta-D-glucan. The results demonstrate a complex interaction between adaptive and innate immune mechanisms in the lung, determined by exposure to common contaminants in airborne dust.

PMID: 9836497

Source: <http://www.ncbi.nlm.nih.gov/pubmed/9836497>